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AMENDMENTS TO THE CLAIMS

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1 (currently amended). A radiation detection device comprising a CsBr crystal having an impurity level of from 0 to 0.22 weight percent as a scintillator and a photoelectron multiplier tube for receiving a light from the scintillator, wherein the photoelectron multiplier tube has a sensitivity permitting the detection of a single-photon, a half bandwidth of 30 ps or less relative to the single-photon and a light-receiving area of 10 mm² or more.

2 (original). The radiation detection device of claim 1, which is adapted for detecting gamma rays.

3 (previously presented). The radiation detection device of claim 1 wherein the CsBr crystal has a CsCl type crystal structure and the Cs:Br atom ratio is about 1:1.

4 (previously presented). The radiation detection device of claim 1 wherein the photoelectron multiplier tube detects a light of a wavelength of from 200 to 500 nm, and the scintillator has an attenuation time of 50 ps or less.

5 (previously presented). The radiation detection device of claim 1 wherein the photoelectron multiplier tube is a MCP built-in photoelectron multiplier tube.

6 (previously presented). The radiation detection device of claim 2 wherein the CsBr crystal has a CsCl type crystal structure and the Cs:Br atom ratio is about 1:1.

7 (previously presented). The radiation detection device of claim 2 wherein the photoelectron multiplier tube detects a light of a wavelength of from 200 to 500 nm, and the scintillator has an attenuation time of 50 ps or less.

8 (previously presented). The radiation detection device of claim 3 wherein the photoelectron multiplier tube detects a light of a wavelength of from 200 to 500 nm, and the scintillator has an attenuation time of 50 ps or less.

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9 (previously presented). The radiation detection device of claim 2 wherein the photoelectron multiplier tube is a MCP built-in photoelectron multiplier tube.

10 (previously presented). The radiation detection device of claim 3 wherein the photoelectron multiplier tube is a MCP built-in photoelectron multiplier tube.

11 (previously presented). The radiation detection device of claim 4 wherein the photoelectron multiplier tube is a MCP built-in photoelectron multiplier tube.